BEFORE THE

Federal Communications Commission

WASHINGTON, D.C.

In the Matter of	)	
	)	
Amendment of Parts 2, 22 and	)	RM-7927
25 of the Commission's Rules	)	PP-28
for an Allocation of	)	
Frequencies for a New	)	
Nationwide Hybrid Space/Ground	)	
Cellular Network for Personal	)	
Mobile Communications	)	
	)	
Request for Pioneer's	)	
Preference by Celsat, Inc.	)	

OPPOSITION TO REQUEST FOR PIONEER'S PREFERENCE

AMSC Subsidiary Corporation ("AMSC"), by its attorneys, hereby opposes the above-referenced request for a pioneer's preference filed by Celsat, Inc. ("Celsat").[1/] As set forth below, Celsat has failed to establish that its proposal for a "Hybrid Personal Communications Network" ("HPCN") satisfies the Commission's criteria for a pioneer's preference.

Background

On February 6, 1992, Celsat filed a petition for rulemaking seeking a spectrum allocation for a new service that Celsat describes as an integrated space/ground cellular network system which will provide mobile voice and data communications, position

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1/ These comments are filed pursuant to the Commission's Public Notice, Mimeo No. 22154 (March 9, 1992).

location service and other information services nationwide. Celsat requests that the Commission allocate to its HPCN service 32 MHz (1610-1625.5 MHz/2483.5-2500 MHz) of the spectrum presently allocated domestically to the Radiodetermination Satellite Service ("RDSS").[2/] Alternatively, Celsat requests the allocation of 37 MHz of S-band spectrum (2110-2129 MHz/2410-2428 MHz) for this service. Celsat also states that its system would require satellite-hub links of between 160 and 195 MHz of spectrum in the 21 GHz and 30 GHz bands. Celsat asks for the allocation to be on an exclusive primary basis for a single HPCN system.[3/]

In addition to its Petition for Rulemaking, Celsat also filed the above-referenced request for a nationwide pioneer's preference. The grant of such a request would make Celsat the exclusive licensee of the HPCN system. Celsat has not filed an application for authority to operate a system or even to conduct tests to experiment with the technology.

2/ Celsat Petition for Rulemaking, RM-7927 (February 6, 1992), at 32. AMSC is opposing the Celsat Petition in a filing being submitted today, on the grounds that Celsat's proposal to use the RDSS bands was filed several months after the cut-off for such proposals and that Celsat has failed to demonstrate that its system could operate without causing interference to or receiving interference from existing users of the bands.

3/ Celsat Petition at 32. Celsat appears to be requesting the relocation of other users of the bands, such as radio astronomy and radionavigation systems in the RDSS uplink band. Celsat claims that there is some ability to share the band with existing users (see Celsat Petition, Appendix D); however, it is apparent from the petition that only the exclusive use of the requested bands will enable Celsat to offer the system capacity it claims.

The allocation of spectrum for mobile satellite voice and data services has been a topic of considerable debate in recent months. As the licensee of the U.S. MSS system, AMSC has been concerned with the growing shortage internationally of MSS spectrum, and has advocated that additional spectrum be made available so that the U.S. MSS system can develop fully.[4/] A number of other entities also submitted applications to use the RDSS bands for mobile satellite services via non-geostationary satellite systems.[5/]

AMSC has petitioned the Commission to deny the non-geostationary satellite system applicants on the grounds that there is not enough spectrum in the RDSS bands for even one of the non-geostationary systems being proposed to operate.[6/] This concern is due largely to sharing constraints with respect to other users of these bands. While the 1992 World Administrative Radio Conference allocated spectrum for MSS in the RDSS bands, these constraints remain.[7/] AMSC demonstrated that, to avoid

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4/ Petition of AMSC, RM-7806 (June 3, 1991); see File Nos. 15/16-DSS-MP-91.

5/ See File Nos. 17-DSS-P-91(48), CSS-91-013, 11-DSS-P-91(6), 18-DSS-P-91(18), 19-DSS-P-91(48), CSS-91-014, 9-DSS-P-91(87), CSS-91-010, 20-DSS-P-91(12), CSS-91-015.

6/ See Petition to Deny of AMSC, File Nos. 17-DSS-P-91(48), CSS-91-013, 18-DSS-P-91(18), 19-DSS-P-91(48), CSS-91-014, 20-DSS-P-91(12), CSS-91-015 (December 18, 1991); Petition of AMSC, RM-7806 (June 3, 1991).

7/ The WARC made additional allocations on a primary or secondary basis worldwide or in Region 2 in the following bands: 1492-1530 MHz; 1610-1626.5 MHz; 1675-1710 MHz; 1930-2010 MHz; 2120-2200 MHz; 2483.5-2520 MHz; and 2670-2690 MHz.

causing harmful interference to other users of the RDSS bands, the proponents of these systems typically would have to reduce the systems' capacities to less than ten channels, a reduction so drastic as to make the cost of the systems' construction and operation clearly uneconomical.

While there is not enough RDSS spectrum available for any of the proposed non-geostationary systems, even as little as the 4-6 MHz of RDSS spectrum that may be available is of substantial utility to AMSC in developing the U.S. MSS system. The RDSS uplink band is proximate to AMSC's already assigned frequencies, and is therefore uniquely suited for integration into AMSC's system. AMSC can put these frequencies to use promptly and at a cost of less than $10 million per satellite.

Discussion

The Commission established a pioneer's preference in order to reward innovators who develop new technologies that lead to the introduction of a new communications service or to the substantial enhancement of an existing service.[8/] The recipient of a pioneer's preference is permitted to have its license application granted without being subject to competing applications.[9/] Thus, if the recipient is basically qualified

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8/ See Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, 6 FCC Rcd 3488, 3492 (1991), recon. granted in part, FCC 92-57 (February 26, 1992) ("Pioneer's Preference Decision").

9/ Id.

to hold a license, the grant of a pioneer's preference is the equivalent of a license grant.

Due to the dispositive nature of a pioneer's preference, the Commission does not grant requests for such preferences casually, but places a heavy burden on proponents to demonstrate that a preference should be granted.[10/] To gain a pioneer's preference, a proponent must demonstrate that its system has enough merit to warrant a spectrum allocation and, ultimately, the award of a license for the new service.[11/] The proponent also must demonstrate that its technology represents "an innovation beyond existing communications technology."[12/] In most cases, the Commission expects that the applicant will have conducted experiments, the results of which will aid the Commission in determining whether allocation of spectrum to a proposed service is in the public interest.[13/] If the proponent

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10/ Pioneer's Preference Decision, 6 FCC Rcd at 3494. See also Tentative Decision, ET Docket No. 91-280, para. 13 (February 11, 1992) ("VITA").

11/ Pioneer's Preference Decision, 6 FCC Rcd at 3493. See also id. at 3492 ("Unless a new technology is associated with a licensable service, there is little opportunity for the Commission to create a system of rewards to encourage its implementation.").

12/ VITA, para. 17. The Commission has defined an innovation to mean that "the petitioner (or its predecessor-in-interest) has brought out the capabilities or possibilities of the technology or service or has brought them to a more advanced or effective state." Pioneer's Preference Decision, 6 FCC Rcd at 3494. It has emphasized that "preferences will be granted only for innovations of same significance." Id. at 3500 n.8.

13/ Id. at 3493.

has not conducted an experiment, it must accompany its preference request with a demonstration of the technical feasibility of the new service or technology.[14/]

The Commission generally considers the grant of a preference for one discrete service area to be adequate incentive to reward an innovator. The Commission will grant a nationwide pioneer's preference only in rare cases.[15/]

To date, the Commission has granted only one pioneer's preference. That preference was awarded to Volunteers in Technical Assistance, Inc. ("VITA"), a non-profit charitable organization. VITA requested the preference for a system consisting of two low-Earth orbit ("LEO") satellites operating in the VHF and UHF bands for data communications related to VITA's humanitarian assistance to persons in other countries.[16/] The Commission found that VITA "clearly was the first both to develop LEO data communications technology and to experiment with the operation of an actual LEO system to support data communications in the VHF spectrum."[17/] Specifically, VITA had launched a rudimentary test version of its technology in 1984, had built upon this test in ensuing years by developing a more advanced system, and had actually launched and operated such a system under an experimental license obtained in early 1989. The tests

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14/ Id.

15/ Pioneer's Preference Decision, 6 FCC Rcd at 3495.

16/ VITA Decision, paras. 1, 3.

17/ Id., para. 15.

and demonstrations conducted under this experimental license confirmed the viability of the VITA satellites. VITA also had developed fully automated earth stations capable of tracking the experimental spacecraft and conducting communications transactions.

Moreover, VITA proposed a simple and inexpensive system that could be implemented without interference to any other of the proposed LEO systems or to other existing users of the band.[18/] Indeed, VITA's pioneer's preference request was not only unopposed, but actually was supported by two other LEO applicants, Orbital Communications Corporation ("Orbcomm") and Starsys Inc. ("Starsys").

Celsat varies from the VITA model in a number of significant respects. As an initial matter, unlike VITA, Celsat cannot operate without displacing other users of the RDSS bands for which it seeks an allocation. Celsat itself appears to request an exclusive allocation for a single system. As AMSC discusses in its opposition to Celsat's Petition for Rulemaking, Celsat would cause interference to or receive interference from other users of the RDSS bands.

The Commission has said that it will not grant a pioneer's preference without first making at least a tentative decision that the service being proposed should receive an allocation. As AMSC has demonstrated previously, the public interest is best

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18/ As a result of this lack of mutual exclusivity, grant of the VITA pioneer's preference did not raise the same Ashbacker issues that would be raised in this case. See Ashbacker Radio Corp. v. FCC, 326 U.S. 327 (1945).

served by authorizing AMSC to use the RDSS uplink band as a supplemental band for its second and third satellites. With so little usable spectrum available in the RDSS bands, this is a far more practical allocation of the frequencies than the proposal of Celsat or the non-geostationary applicants, whose systems would not have enough spectrum to operate in the RDSS bands.[19/]

In addition, Celsat has failed to submit any showing that its proposal is truly innovative. The concept of a single mobile system using terrestrial and satellite elements in different geographic areas on the same frequencies is not novel. AMSC understands that there is a system operated by the U.S. military that is consistent with this concept. While such a system has not been implemented commercially to date, simply proposing such a concept should not be the basis for the grant of a pioneer's preference. Before Celsat can be considered for a pioneer's preference, it at least must demonstrate that it has developed and tested the technology to create such a system and that this technology works and is truly innovative. Celsat has not even attempted to do this.

19/ For example, the Russian Federation took a reservation at the recently concluded World Administrative Radio Conference that would protect the Russian Glonass radionavigation system up through 1620.6 MHz. See Document No. 389 at 25, Declaration 59.

Conclusion

For the above-stated reasons, AMSC Subsidiary Corporation urges the Commission to dismiss or deny the pioneer's preference request submitted by Celsat, Inc.

Respectfully submitted,

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Dated: April 8, 1992

DECLARATION

I, Thomas M. Sullivan, do hereby declare as follows:

1. I have a Bachelor of Science degree in Electrical Engineering and have taken numerous post-graduate courses in Physics and Electrical Engineering.

2. I am presently employed by Atlantic Research Corporation and was formerly employed by the IIT Research Institute, DoD Electromagnetic Compatibility Analysis Center.

3. I am qualified to evaluate the technical information in AMSC Subsidiary Corporation's Opposition to Request for Pioneer's Preference. I am familiar with Part 25 and other relevant parts of the Commission's Rules and Regulations.

4. I received, in 1982, an official commendation from the Department of the Army for the establishment of international provisions for the worldwide operation of mobile earth stations.

5. I served as Technical Advisor to the U.S. Delegation to WARC-92 and participated in sessions of WARC-92 addressing frequency sharing and other aspects of MSS.

6. I have been involved in the preparation of and have reviewed AMSC Subsidiary Corporation's Opposition to Request for Pioneer's Preference. The technical facts contained therein are accurate to the best of my knowledge and belief.

Under penalty of perjury, the foregoing is true and correct.

April 8, 1992
Date

Thomas M. Sullivan
Thomas M. Sullivan

CERTIFICATE OF SERVICE

I, Valerie A. Mack, hereby certify that a true and correct copy of the foregoing "OPPOSITION TO REQUEST FOR PIONEER'S PREFERENCE," has been sent by prepaid United States mail, first class, on this 8th day of April, 1992, to the following:

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